

WHAT IS CLAIMED IS:

1. A data compressing apparatus for outputting raw data, a pointer, and a command from a data string, comprising

5 substituting means which outputs the command in place of said raw data or said pointer when a data string as a target of said command coincides with a data string as a target of said raw data and a data string indicated by said pointer or a combination of them.

10 2. The data compressing apparatus according to claim 1, further comprising substituting means which, when a code length assigned to the command is shorter than a length of data comprising the raw data and the pointer, replaces the raw data or the pointer serving as a source with the command.

15 3. The data compressing apparatus according to claim 1 or 2, wherein said command is constructed by a command code and an extension code.

20 4. The data compressing apparatus according to claim 3, wherein said extension code is constructed by a code indicative of a kind of command and an operand.

25 5. The data compressing apparatus according to any one of claims 1 to 4, wherein

a first bit is used to distinguish the raw data, the pointer, and the command, and

a second bit is used to distinguish the pointer and the command.

6. The data compressing apparatus according to claim 5, further comprising substituting means which, when each of a plurality of commands is constructed by a kind of command and an operand, executes encoding for gradually increasing a code length in accordance with the kind of each command.

7. The data compressing apparatus according to claim 5, further comprising substituting means which, when each of a plurality of commands is constructed by a kind of command and an operand, executes encoding for gradually increasing the code length in accordance with a parameter of each operand.

8. The data compressing apparatus according to any one of claims 1 to 7, further comprising substituting means which executes, every predetermined data unit, a process for, when a data string designated by a specific pointer coincides with data strings designated by a plurality of other pointers, replacing said specific pointer with a definition command and replacing said plurality of other pointers with the code substitution command corresponding to said definition command.

9. The data compressing apparatus according to claim 8, wherein among the data strings existing in said predetermined data unit, the data string which appears first is selected as a data string

designated by the specific pointer.

10. The data compressing apparatus according to claim 8 or 9,
further comprising substituting means which, when a plurality of
5 definition commands are set, counts frequencies of appearance, in the
predetermined data unit, of a plurality of data strings designated by
the pointer replaced with said plurality of definition commands and
forms a definition table in which said definition commands have been
disclosed in order of said frequencies of appearance.

10 11. The data compressing apparatus according to claim 10,
wherein said definition table is newly formed every predetermined data
unit.

15 12. The data compressing apparatus according to any one of
claims 8 to 10, further comprising substituting means which
discriminates whether a data amount of the data string designated by
the specific pointer coincides with a data amount of data string
designated by said other pointer or not, discriminates whether a
20 difference between an address of the data string designated by the
specific pointer in the predetermined data unit and an address of the
data string designated by said other pointer coincides with a difference
between an offset value which said specific pointer has and an offset
value which said other pointer has or not, and if they coincide,
25 determines that the data string designated by the specific pointer
coincides with the data string designated by said other pointer.

13. A data decoding apparatus, wherein when data including raw data, a pointer, and a command is inputted,

said command is executed, said data is returned to the raw data or the pointer, and said raw data or said pointer is returned to a target data string.

14. A data decoding apparatus, wherein

when data which has been compressed every predetermined data unit is given in a manner such that when a data string which is data including raw data, a pointer, and a command and is designated by a specific pointer coincides with data strings designated by a plurality of other pointers, said specific pointer is replaced with a definition command and said plurality of other pointers are replaced with a code substitution command corresponding to said definition command,

said code substitution command is returned to the definition command, the definition command is returned to the raw data or the pointer, and said raw data or said pointer is returned to the data string as a target every said predetermined data unit.